Name of Organization: Orleans County Soil and Water District

Type of Organization: County

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Project Title: Oak Orchard Grazing Lands Initiative

Project Category: Habitat (Ecological) Protection and Rest

Rank by Organization (if applicable): 0

Total Funding Requested ($): 60,000 **Project Duration:** 2 Years

Abstract:

Orleans County Soil and Water District (Orleans County SWCD) in association with the Ontario Lake Plains Resource Conservation and Development Council Inc. (Lake Plains RC&D) propose to assist private land owners in the implementation of grazing practices developed and recommended through the New York State Grazing Lands Conservation Initiative (GLCI). Through the GLCI program the Lake Plains RC&D and Orleans County SWCD is in the process of completing a number of grazing plans for local farmers in Oak Orchard Watershed (Johnson Creek, Sandy Creek, and Oak Orchard). We are requesting funding to assist with implementation of these grazing plans. This would include fencing, livestock watering facilities, laneways, soil tests, and pasture management, to be established or expanded on 5 to 10 farms in the Oak Orchard portion of the Lake Ontario Drainage Basin. The Intensive Rotational Grazing (IRG) System also known as short duration grazing systems as described in the Agricultural Management Practices Catalog for Nonpoint Source Pollution Prevention & Water Quality Protection in New York State are considered cost effective (Best Management Practices) BMP's in controlling agricultural and surface runoff as well as reducing pollutants such as sediments, nutrients, pathogens, pesticides, organic matter, and ammonia. The project is important because it will provide working models for area farmers and demonstrate to them that conservation practices that protect water quality can also be highly profitable. In the past few years we have seen some area farmers switch to intensive rotational grazing systems, however, we need more good examples to let people see how well-adapted this farming system is to the area. Funding is also needed to offer the financial incentive to make the improvements.

Location: Lake Ontario (Minor Tributaries) Drainage Basin 3- Oak Orchard-Twelvemile Hydrologic Unit Code 04130001, NY

Geographic Areas Affected by the Project

States:

- ☐ Illinois
- ☐ Indiana
- ☐ Michigan
- ☐ Minnesota
- ☒ New York
- ☐ Pennsylvania
- ☐ Wisconsin
- ☐ Ohio

Lakes:

- ☐ Superior
- ☐ Huron
- ☐ Michigan
- ☐ Erie
- ☒ Ontario
- ☐ All Lakes

Geographic Initiatives:

☐ Greater Chicago ☐ NE Ohio ☐ NW Indiana ☐ SE Michigan ☐ Lake St. Clair

Primary Affected Area of Concern: Not Applicable

Other Affected Areas of Concern: Lake Ontario (Minor Tributaries) Drainage Basin-3, Oak Orchard-Twelvemile Hydrologic Unit Code 04130001, Oak Orchard, Johnson Creek, and Sandy Creek

For Habitat Projects Only:

Primary Affected Biodiversity Investment Area:

Other Affected Biodiversity Investment Areas:

Problem Statement:

The reduction of non-point source pollutants on agricultural lands presents a unique management challenge for farmers and local agencies responsible for water resource protection. The New York State Department of Environmental Conservation (NYSDEC) has identified that 90% of the remaining water quality problems in New York State are due to non-point sources including agricultural activities . According to the 1996 Great Lakes Basin Agricultural Profile (coordinated by the Great Lakes Commission), soil erosion and sedimentation, agriculture pesticide use, and manure management are three basin land-use issues with significant implications for water quality and the agricultural economy.

Land use in the Oak Orchard watersheds is primarily agricultural. Areas of field crops are intermingled with intensively managed vegetable crops and animal operations, and include concentrations of apple orchards. The water quality strategy for Orleans County identified nutrients and sediment runoff as well as livestock wastes a county wide water quality concern. Water quality strategies and local working groups have identified intensive rotational grazing systems as BMP's which can be applied by livestock producers to reduce erosion and, minimize nutrient runoff, as well as limit the infiltration of pathogens into ground water.

Within the project area Johnson Creek and Oak Orchard Creek are listed in the 1998 NYSDEC Priority Water-bodies List as impacted by non-point sources of pollution, primarily sediment originating from agricultural sources, but also impaired by excess nutrient loading. These impacts were also identified in the two-year stream-monitoring project recently conducted by the Orleans County Soil and Water Conservation District in cooperation with the State University of New York at Brockport (SUNY-Brockport). Starting in June of 1997, intensive, automated water quality monitoring on Johnson Creek, Oak Orchard Creek, and Sandy Creek was initiated. These streams flow into Lake Ontario. This two-year study on the three major tributaries in Orleans County represents a strong benchmark of discharge and loading that can be used to measure the success of future remediation efforts. The results of this study can be found in the report titled Nutrient and Sediment Loss from Watersheds of Orleans County - Year 2, June 1998 to May 1999 (Johnson, Oak Orchard and Sandy Creek Watersheds), by J.C. Makarewiez and T. W. Lewis, Center for Applied Aquatic Science and Aquaculture, Department of Biological Sciences, SUNY Brockport, December 1999.

The following are some of the findings of this study (note: annual precipitation was more than 7 inches below normal for the sampling period):

Ø A large amount of an essential nutrient, phosphorus, was lost from the watershed. On a daily basis approximately 113 pounds of phosphorus is lost per day from the three watersheds.

Ø Soil loss was excessive, especially from Oak Orchard Creek, during meteorological events. These high losses from the watershed during precipitation events strongly suggest erosive losses from agriculture.

Ø Loss of nitrogen was greatest from the Oak Orchard Creek watershed, then Johnson Creek, and Sandy Creek.

Ø Johnson Creek had the highest agricultural runoff of soil, nitrates, and phosphorus in the county. Losses are in excess of the state average. The planned restoration of Atlantic Salmon stocks in Johnson Creek is threatened by lack of habitat elements including clean gravel's for reproduction and riparian shading and hiding cover for brood rearing.

The Oak Orchard Grazing Lands Initiative is very important to the future of small, family farms in our area. Many of these farms are old facilities, and most producers have limited surplus capital for improvements. We need funding to help encourage adoption of the proposed grazing systems.

Proposed Work Outcome:

The Ontario Lake Plains RC&D Council has entered into an agreement with the USDA Natural Resource Conservation Service (NRCS) to facilitate the implementation of the New York State Grazing Lands Conservation Initiative (NYSGLCI). This program provides for technical assistance, educational and related assistance to those individuals who own private grazing lands. The technical assistance offers opportunities for: better grazing land management: protecting soil from erosive wind and water; using more energy-efficient ways to produce food and fiber; conserving water; providing habitat for wildlife; sustaining forage and grazing plants. The Ontario Lake Plains RC&D Council is currently providing the community the services of two grazing Advocates. These Advocates have been working in the area for the last two years (1998 & 1999) and will continue to provide services into the year 2000. The Advocates work cooperatively with an interdisciplinary and multi-agency teams, the lead Resource Management Advocate, and the Statewide Grazing Lands Conservation Initiative Coordinator to promote the efforts of the NYSGLCI. Training is also provided through NRCS for the purpose of developing grazing plans and providing technical assistance associated with the installation of grazing BMP's. During the last year the Advocates have been involved with the development of a number of grazing plans. These plans were developed with the help of the NRCS and follow NRCS standards & specifications.

Orleans County Soil and Water District in association with the Ontario Lake Plains RC&D proposes to assist private land owners in the implementation of grazing practices developed by our Advocates in Oak Orchard Watershed (Johnson Creek, Sandy Creek, and Oak Orchard). We are requesting funding to assist with implementation of approved grazing plans. This would include fencing, livestock watering facilities, laneways, soil tests, and pasture management, to be established/expanded on at least 5 to 10 farms in the Oak Orchard Watershed. Each participating livestock producer will be expected to contribute up to 25% of cash and/or in-kind services toward the respective project. In addition, each participant will enter into an agreement with the sponsor or its agent specifying each parties responsibilities which will include acknowledgement that the project must be completed within 1 year of execution of the previously mentioned agreement.

The goal of this proposal is to improve water quality coming off agricultural land in the Oak Orchard Watershed. Water quality strategies and local working groups have identified intensive rotational grazing systems as BMP's which can be applied by livestock producers to reduce erosion and, minimize nutrient runoff, as well as limit the infiltration of pathogens into ground water.

Project Milestones:	**Dates:**
Project Start	10/2000
Contact Farmers	11/2000
Select Projects	02/2001
Complete Design Work & Prepare Contracts	05/2001
Select Contractors & Implement Contract	06/2001
Monitor and Administer Contracts	07/2001
Monitor and Administer Contracts	07/2002
Project End	11/2002

☒ Project Addresses Environmental Justice

If So, Description of How:

The mission of the Ontario Lake Plains RC&D Council is to bring together people of diverse cultures and backgrounds who share a common concern for the natural resources of the region, so that, working together, these citizens may form an effective strategy to develop, enhance, and preserve these resources to the benefit of all present and future citizens of, and visitors to Erie, Genesee, Monroe, Niagara, Orleans, and Wayne Counties.

☒ Project Addresses Education/Outreach

If So, Description of How:

A coordinated outreach and education effort through the Ontario Lake Plains RC&D, Orleans County SWCD, Orleans County Water Quality Coordinating Committee, GRAZE NY (GLCI), and Cornell Coop. Extension already is underway. The Orleans County SWCD and the Ontario Lake Plains RC&D continue to assist local landowners interested in the grassland farming. This is being accomplished through hiring of local Advocates. These Advocates meet with and assist landowners interested in starting a grazing program. They offer everything from just an afternoon discussion of how rotational grazing works to a full plan on how to implement the program on your farm. Currently we have two very active Advocates in our area. These Advocates are available to assist landowners with questions or needs in implementing or developing a rotational grazing plan. During 1999 these advocates contacted approximately 100 farmers in our region and we held three pasture walks at local farms. If this project is funded the education/outreach will continue. Newsletters, field trips, pasture walks, and news releases will inform landowners and the public. Through this project we will be able to direct farmers to areas where grazing plans we helped develop are underway and show first hand the development and operation of new pasture management systems.

Project Budget:

	Federal Share Requested ($)	Applicant's Share ($)
Personnel:	3,100	2,700
Fringe:	900	0
Travel:	1,000	300
Equipment:	0	0
Supplies:	0	0
Contracts:	52,000	0
Construction:	0	0
Other:	0	0
Total Direct Costs:	57,000	3,000
Indirect Costs:	3,000	0
Total:	60,000	3,000
Projected Income:	0	0

Funding by Other Organizations (Names, Amounts, Description of Commitments):

Natural Resources Conservation Service (GLCI Program) $2,000.00*
Orleans County Soil and Water Conservation District……. $3,000.00 (shown above)
Ontario Lake Plains RC&D …….. $3,000.00*
Total …….. $8,000.00*

These are "in-kind" services provided by the major participants in the project. The Indirect Costs shown in the Project Budget is based on a 5% overhead assessment.

* Not listed above in Project Budget

Description of Collaboration/Community Based Support:

As mentioned before a coordinated outreach and education effort through the USDA Natural Resources Conservation Service, Ontario Lake Plains RC&D, Orleans County SWCD, Orleans County Water Quality Coordinating Committee, GRAZE NY (GLCI), and Cornell Coop. Extension already is underway. Other partners in the area include Niagara County Soil and Water Conservation District, as well as the US Fish and Wildlife Service. This project will also be closely tied to the ongoing Watershed Studies being conducted by Orleans County SWCD and the Center for Applied Aquatic Science and Aquaculture, Department of Biological Sciences, at SUNY Brockport.